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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,837	11/08/2001	Nobuyuki Yasuda	7217/65962	7632

7590 02/17/2005

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EXAMINER
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WANG, TED M

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/007,837

Applicant(s)

YASUDA ET AL.

Examiner

Ted M Wang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☒ Claim(s) 2-4, 7, and 8-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/8/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Dsi, 8Fsi and Dso as described in pages 8 and 9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Preliminary Amendment***

2. The preliminary amendment filed on 3/20/2002 has been entered.

### ***Claim Objections***

3. Claims 8-11 are objected to because of the following informalities:

- In claim 8, line 4, change "a\_second" to – a second --, and line 17, delete – a action --, respectively.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yasuda (US 5,835,032).

- With regard claim 1, Nobuyuki Yasuda discloses a sampling frequency conversion apparatus comprising:

storage means into which said input data are continuously written and read-out (Fig.16 element 113, Fig.19, column 4 lines 10-20, column 20 lines 47-64, and column 21 lines 1-13), where the memory which continuously writes and reads the data is called a ring buffer memory;

interpolation processing means for interpolating the data read out from said storage means (Fig.2 element 3, Fig.4 element 14) to obtain the data of said second sampling frequency (Fig.4 element 19, Fig.6C, and column 9 lines 38-51);

address difference detector means for detecting an address difference between a writable address and a readable address in said storage means (Fig.20 elements 132, column 4 lines 10-20, and column 21 lines 1-55);

and address control means for performing an optimization operation optimizing the address difference detected by said address difference detector means (Figs.20 and 21, column 4 lines 1-9, and column 21 lines 1-67);

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wherein said address control means adaptively sets a limitation on the optimizing operation (Fig.22 and column 22 line 10 – column 23 line 6), where the limitation is first set to within a range of from  $CT - 0.5 F_{si}T$  to  $CT + 0.5 F_{si}T$ , then out of the range  $CT - 0.5 F_{si}T$  to  $CT + 0.5 F_{si}T$ , and ...etc.

- With regard claim 5, Nobuyuki Yasuda further discloses said address control means works so as not to execute said optimization operation when the address difference detected by said address difference detecting means falls within a predetermined range after passage of a predetermined period of time from a time when the input data is initially supplied (Fig.22 and column 22 lines 10-20).
- With regard claim 6, Nobuyuki Yasuda further discloses said address control means performs a control operation to bring said address difference close to a predetermined optimum value imposing no limitation when a predetermined period of time has not been passed after a start of supplying said input data or when the address difference detected by said address difference detector means falls outside of a predetermined range (Fig.22 and column 22 line 10 – column 23 line 6).

***Allowable Subject Matter***

6. Claims 2-4 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claims 8-11 would be allowable if rewritten to overcome the objection(s) set forth in this Office action.
8. The following is an examiner's statement of reasons for allowance.

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- The prior art fails to teach an apparatus of Claims 8 that specifically comprises the following:

-- The instant application is deemed to be directed to a non-obvious improvement over the admitted prior art of the instant application and the invention patented in Pat. No. 5,191,334, 5,835,032, and 5,996,044. The improvement comprises that address control means works so as not to execute the optimization operation when the address difference detected by the address difference detector means in each of said plurality of sampling frequency conversion means falls within a predetermined range after passage of a predetermined period of time from a start of supplying said input data, thereby to eliminate a time difference between the output data from said plurality of sampling frequency conversion means in order to improve the system complexity of the sampling frequency conversion.

### ***Conclusion***

9. Reference US 5,982,035 is cited because they are put pertinent to the sampling frequency conversion device. However, none of references teach detailed connection as recited in claim.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted M Wang  
Examiner  
Art Unit 2634

Ted M. Wang



**SHUANG LIU**  
**PRIMARY EXAMINER**